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IS 12114-1 (1987): Gold Alloy Coverings on Watch Cases and their Accessories, Part 1: General Requirements [PGD 23: Horology]

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“Knowledge is such a treasure which cannot be stolen”





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Indian Standard

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## SPECIFICATION FOR GOLD ALLOY COVERINGS ON WATCH CASES AND THEIR ACCESSORIES

### PART 1 GENERAL REQUIREMENTS

**1. Scope** — Prescribes general requirements for gold alloy coverings applied to watch cases, their accessories and crowns including bracelets, when they are permanently attached to the case.

**2. Definitions** — For the purpose of this standard, the definitions given in IS : 3554-1966 'Glossary of terms relating to electroplating' and the following definitions shall apply.

**2.1 Gold Plated Covering** — Covering achieved with a method of electrolytic, chemical or any other process by which a layer of gold is deposited to the watch cases or their accessories.

**2.2 Rolled Gold Covering** — Covering achieved with a method by which a layer of gold alloy is bonded to a sheet or bar of base metal and the whole being subjected to reduction by rolling.

**2.3 Gold Capping** — Covering achieved with a method by which a cap of gold alloy produced separately is permanently affixed to the component.

**2.4 Significant Surface** — That area of the article covered or to be covered by the coating and for which the coating is essential to the appearance or serviceability of the components. In case of no agreement between supplier and customer, significant surface will be any surface which can be touched by 5 mm diameter ball.

**2.5 Fineness** — The proportion of pure gold contained in the gold alloy.

Note — Normally expressed in thousands, 4 167 thousands — 1 Carat.

#### 3. Fineness of Gold Alloy

**3.1** The minimum fineness of gold alloy shall be as follows:

Type of Covering	Fineness (thousands)
Gold plated covering	585
Rolled gold covering	417
Gold capping	585

#### 4. Requirements for Gold Coverings/Coatings

**4.1 Appearance** — A preliminary sample having the required colour and finish shall be supplied or approved by the purchaser.

**4.2** The electroplated article shall be clean and free from damage.

**4.3** The significant surface of the article shall be free from clearly visible process defects, such as pits, roughness, cracks or uncoated areas and shall not be stained or discoloured, blistering or other signs of poor adhesion not acceptable on any surface of the article. On articles, where a contact mark on the significant surface is unavoidable, its position shall be agreed between the parties.

**4.4 Thickness** — Gold coverings are classified by thickness and the preferred range is given in Table 1. Any other coating thickness above the minimum of 0.5  $\mu\text{m}$  and expressed in whole numbers of micrometers, may be called up by specifying the required minimum local thickness, at the appropriate place in the classification number.

**4.4.1** Thickness of the coverings shall be measured over a reference area according to one of the methods described in IS : 12114 ( Part 2 )-1987 'Specification for gold alloy coverings on watch cases and thin accessories: Part 2 Determination of fineness, thickness and corrosion resistance'.

**TABLE 1 PREFERRED THICKNESS OF GOLD COVERINGS/COATING  
FOR WATCH CASES AND THEIR ACCESSORIES**

( Clause 4.4 )

Type of Covering	Nominal Thickness/Coating
Gold plated covering	0·5-1-2-5-10-20-40-80 µm
Rolled gold covering	2·5-10-20-40-80 µm
Cold capping	200-250-300 µm

Minimum gold thickness at any point shall not be less than — 20 percent of nominal thickness.

## **5. Marking on Coverings**

**5.1** Gold plated articles shall be marked with the following:

- Letter denoting the type of covering,
- Figure giving the nominal thickness in micrometres, and
- Maker's mark.

The markings shall be indelible and normally visible.

**5.2** Watch-case components having different thicknesses of gold alloy, only the minimum value is to be marked.

**5.3** Clauses **5.1** and **5.2** do not apply to crowns.

**5.4** The fineness of the gold alloy shall not be mentioned.

**5.5** The following letters immediately followed by the nominal value of the thickness in micrometres shall be used:

- P for gold plated covering;
- L for rolled gold covering; and
- C for gold capping

*Examples :*

P40 : Gold plated covering, nominal thickness 40 µm

L20 : Rolled gold covering, nominal thickness 20 µm

C250 : Gold capping, nominal thickness 250 µm

## **6. Tests**

**6.1** Components having gold alloy covering shall comply with the test requirements given in IS : 12114 ( Part 2 )-1987 'Specification for gold alloy coverings on watch cases and their accessories: Part 2 Determination of fineness, thickness and corrosion resistance'.

## **E X P L A N A T O R Y N O T E**

The Indian Standard on gold alloy covering is being issued in the following parts:

Part 1 General requirements

Part 2 Determination of fineness, thickness and corrosion resistance

Part 3 Mechanical properties

This standard is based on ISO 3160/1-1982 Watch cases and accessories — Gold alloy coverings — Part 1 General requirements, issued by the International Organization for Standardization.